

541,130

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
29 July 2004 (29.07.2004)

PCT

(10) International Publication Number  
**WO 2004/063124 A1**

(51) International Patent Classification<sup>7</sup>: **C04B 38/02**,  
22/04, 21/00

[AU/AU]; 41 Bennett Parade, Kew East, 3102, Victoria,  
AU (AU).

(21) International Application Number:  
PCT/AU2004/000055

(74) Agents: **CURWEN, Julian, C., B. et al.**; Davies Collison  
Cave, 1 Nicholson Street, Melbourne, Victoria 3000 (AU).

(22) International Filing Date: 15 January 2004 (15.01.2004)

(81) Designated States (*unless otherwise indicated, for every  
kind of national protection available*): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
2003900156 15 January 2003 (15.01.2003) AU

(84) Designated States (*unless otherwise indicated, for every  
kind of regional protection available*): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), Euro-  
pean (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR,  
GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,  
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,  
ML, MR, NE, SN, TD, TG).

(71) Applicant (*for all designated States except US*): **COM-  
MONWEALTH SCIENTIFIC AND INDUSTRIAL  
RESEARCH ORGANISATION** [AU/AU]; Limestone  
Avenue, Campbell, 2612, Australian Capital Territory, AU  
(AU).

(72) Inventors; and

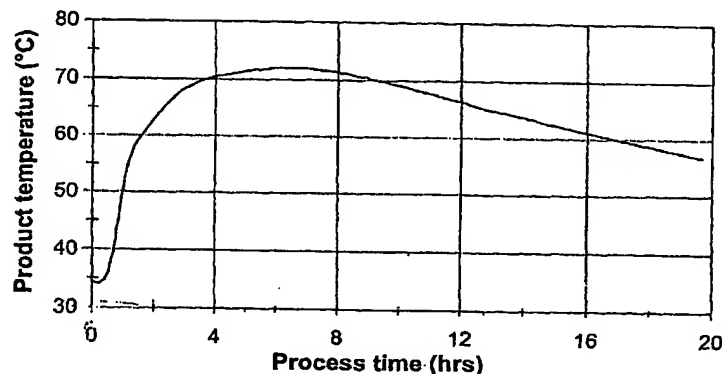
(75) Inventors/Applicants (*for US only*): **MAK, Swee Liang**  
[MY/AU]; 7 Kalara Place, Vermont South, 3133, Vic-  
toria, AU (AU). **SHAPIRO, Genrietta** [AU/AU]; 5/25  
Mayfield Street, East St. Kilda, 3183, Victoria, AU (AU).  
**RITCHIE, David James Bell** [AU/AU]; 60 Wedge Road,  
Carrum Downs, 3201, Victoria, AU (AU). **BANKS, Rod-  
ney William** [AU/AU]; 35 Northcliffe Road, Edithvale,  
3196, Victoria, AU (AU). **QUICK, Geoffrey William**

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: CEMENTITIOUS PRODUCTS



(57) Abstract: A method of manufacturing a porous cementitious product, which method comprises: forming a cementitious pre-  
mix; casting the premix in a desired configuration; generating gas bubbles within the premix; and curing the premix, wherein gas  
bubbles are generated and/or collapsed at specific locations within the premix in order to produce a porosity profile along a cross-sec-  
tion of the product such that the product comprises a relatively low density core region and higher density outer regions. A method  
of manufacturing a porous cementitious product, which method comprises: forming a cementitious premix; casting the premix in a  
desired configuration; generating gas bubbles within the premix; and curing the premix, wherein gas bubbles are generated and/or  
collapsed at specific locations within the premix in order to produce a porosity profile along a cross-section of the product such that  
the product comprises a relatively low density core region and higher density outer regions.

WO 2004/063124 A1